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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,312	07/24/2003	Margaret McLaughlin	01997/543002	1953

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CLARK & ELBING LLP  
101 FEDERAL STREET  
BOSTON, MA 02110

EXAMINER

DAVIS, RUTH A

ART UNIT PAPER NUMBER

1651

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/626,312

Applicant(s)

MCLAUGHLIN ET AL.

Examiner

Ruth A. Davis

Art Unit

1651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 22-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☒ Claim(s) 5-11, 13-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/05.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of group I, claims 1 - 21 in the reply filed on April 7, 2006 is acknowledged.

Claims 22 – 27 are withdrawn from consideration as being drawn to nonelected subject matter.

### ***Specification***

2. The disclosure is objected to because of the following informalities: the term "gonatropic" should be spelled correctly as "gonadotropic" throughout the specification.

Appropriate correction is required.

### ***Claim Objections***

3. Claims 5 – 11 and 13 – 14 are objected to because of the following informalities:

In claims 5 – 8, 10, 13 and 14, "gonatropic" should be spelled "gonadotropic".

In claims 9 and 11, "lilipristone" should be spelled "lilopristone".

Appropriate correction is required.

4. Applicant is advised that should claims 4 – 6 be found allowable, claims 10, 13 and 14 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after

Art Unit: 1651

allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1 – 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

The instant claims are drawn to methods of treating peripheral nerve sheath tumors with compounds that modulate activity of a gonadotropic steroid receptor, small molecule antagonists, antibodies, antisense nucleic acid or RNAi, wherein the compounds have certain activities or functions. These are genus claims that encompass a wide array of molecules. The specification does not disclose any of these small molecule antagonists, antibodies, antisense nucleic acid or RNAi, nor does it provide any teachings as to how the structures of these compounds relate to their function or method of treating. Thus, the specification neither describes the complete structure of a representative number of species, nor does the specification describe a representative number of species in terms of partial structure and relevant identifying characteristics. Absent of such

Art Unit: 1651

teachings and guidance as to the structure-function relationship of these molecules, the specification does not describe the claimed small molecule antagonists, antibodies, antisense nucleic acid or RNAi molecules in such full, clear, concise and exact terms so as to indicate that Applicant had possession of these compounds/molecules at the time of filing of the present application. Thus, the written description requirement has not been satisfied.

7. Claims 1 – 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The analysis of whether a claims is supported by the disclosure requires a determination of whether that disclosure, when filed, contained sufficient information regarding the subject matter of the claims as to enable one skilled in the art to make and use the claimed invention. The standards for determining whether this burden has been met, is by posing the question: is the experimentation needed to practice the invention undue or unreasonable? While a patent need not teach what is well known in the art, it must teach one in the art how to make and/use the claimed invention with out undue experimentation. There are many factors to be considered when determining whether the disclosure satisfies the enablement requirement. These factors include but are not limited to the breadth of the claims; the nature of the invention; the state of the prior art; the level of one of ordinary skill in the art; the level of predictability in the art; the amount of

Art Unit: 1651

direction provided by the inventor; the existence of working examples; and the quantity of experimentation needed to make or use the invention based on the content of the disclosure.

The claims are drawn to a method for preventing peripheral nerve sheath tumors comprising administering a wide array of compounds. "Prevention" provides the expectation that the disorder/condition does not occur in response to a challenge or initiating event. While there is no requirement that prevention must be absolute in all cases, there is a reasonable expectation that some element of prevention can be shown. The standard for such is extremely high, and it is expected that the showing will be actual rather than implied, prophetic, or with a model. The standard of enablement is higher for such inventions because effective preventions of disease conditions are relatively rare and may even be unbelievable in the absence of strong supporting evidence. The instant specification fails to teach one in the art how to prevent peripheral nerve sheath tumors using a single compounds, let alone all of the compounds encompassed by the claims. Preventing cancer and/or tumors is extremely unpredictable as a therapeutic compound may work for one individual and not another. The specification fails to direct one in the art how to chose a particular compound that might work, what the therapeutic dose or regimen would be to effectively prevent a tumor from forming, and when such a treatment would be administered to obtain the claimed effect. Further, the specification is absent working examples of preventing the tumors in a subject. It would place an undue burden of experimentation on one in the art to determine what an effective compound might be, what the dose and regimen would be for that compound and whether

Art Unit: 1651

or not it would even work to prevent peripheral nerve sheath tumors. Thus the enablement requirement has not been satisfied.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1 – 2 and 4 – 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Kumar (US 2002/0115613).

Applicant claims a method for treating or preventing a peripheral nerve sheath tumor, comprising administering to a mammal a therapeutically effective dose of a compound that modulates the biological activity of a gonadotropic steroid receptor (GSR). The receptor is a progesterone, estrogen, or androgen receptor; the compound activates activity of the receptor; or inhibits activity of the receptor. The compound is selected from mifepristone, onapristone, lilopristone, Org 31710, Org 31806, tamoxifen, raloxifen, faslodex, TAS-108, droloxifen, ICI164384, atemestane, bicalutamide, flutamide and nilutamide; or is selected from mifepristone, onapristone, lilopristone, Org 31710 and Org 31806, specifically mifepristone. More than one GSR is modulated,

Art Unit: 1651

selected from progesterone, estrogen or androgen receptors, specifically the progesterone receptor. The method further comprises a second therapeutic regimen selected from tumor resection, chemotherapy and radiotherapy. The compound is a small molecule antagonist, neutralizing antibody, antisense nucleic acid, double stranded interference ribonucleic acid; the peripheral nerve sheath tumor is selected from a neurofibroma, schwannomas, perineuriomas, malignant peripheral nerve sheath tumors, and triton tumors, specifically a neurofibroma, a sporadic neurofibroma and is associated with type 1 neurofibromatosis.

Kumar teaches a method for treating cancer, the method comprising administering mifepristone (a compound, or small molecule antagonist, that inhibits progesterone and estrogen receptors and activates androgen receptors) (abstract). The method is combined with other methods of treatment to include surgery (tumor resection), radiation (radiotherapy) or chemotherapy (0007-0012).

Kumar does not teach the method wherein it treats or prevents a peripheral nerve sheath tumor of the claimed type. However, the claims are drawn to a method for preventing such tumors. Thus, by practicing the methods of Kumar, one is intrinsically preventing peripheral nerve sheath tumors.

Therefore, the reference anticipates the claimed subject matter.

10. Claims 1 – 2, 4 – 14 and 17 – 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Grubb (US 5521166).

Applicant claims a method for treating or preventing a peripheral nerve sheath tumor, comprising administering to a mammal a therapeutically effective dose of a



Art Unit: 1651

compound that modulates the biological activity of a gonadotropic steroid receptor (GSR). The receptor is a progesterone, estrogen, or androgen receptor; the compound activates activity of the receptor; or inhibits activity of the receptor. The compound is selected from mifepristone, onapristone, lilopristone, Org 31710, Org 31806, tamoxifen, raloxifen, faslodex, TAS-108, droloxifen, ICI164384, atemestane, bicalutamide, flutamide and nilutamide; or is selected from mifepristone, onapristone, lilopristone, Org 31710 and Org 31806, specifically mifepristone. More than one GSR is modulated, selected from progesterone, estrogen or androgen receptors, specifically the progesterone receptor. The compound is a small molecule antagonist, neutralizing antibody, antisense nucleic acid, double stranded interference ribonucleic acid; the peripheral nerve sheath tumor is selected from a neurofibroma, schwannomas, perineuriomas, malignant peripheral nerve sheath tumors, and triton tumors, specifically a neurofibroma, a sporadic neurofibroma and is associated with type 1 neurofibromatosis.

Grubb teaches a method for administering mifepristone, onapristone or lilopristone (col.3).

Grubb does not teach the method wherein it treats or prevents a peripheral nerve sheath tumor of the claimed type. However, the claims are drawn to a method for preventing such tumors. Thus, by practicing the methods of Grubb, one is intrinsically preventing peripheral nerve sheath tumors.

Therefore, the reference anticipates the claimed subject matter.

Art Unit: 1651

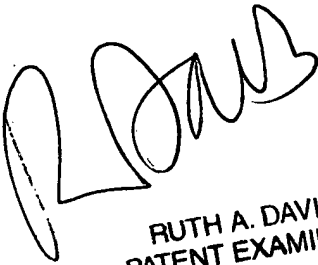
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruth A. Davis whose telephone number is 571-272-0915.

The examiner can normally be reached on M-F 7:00 - 2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 28, 2006  
AU 1651



RUTH A. DAVIS  
PATENT EXAMINER